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EXAMINER				
HE, JIALONG				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/520,374

Applicant(s)

JELINEK ET AL.

Examiner

JIALONG HE

Art Unit

2626

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-4, 6, 7, 14, 19, 32 and 63-97 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-4, 6, 7, 14, 19, 32 and 63-97 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/808)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Response to Arguments

2. Applicant's arguments filed on 05/27/2009 have been fully considered and the arguments are persuasive. Reference to Graf (WO 01/03391, Applicant's IDS) is no longer used and a reference to Proctor (US Pat. 5,519,779) is cited in following rejections.

Information Disclosure Statement

3. The information disclosure statement (IDS) submitted on 3/10/2009 and 5/27/2009 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Specification

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

5. Claims 4 and 91 are objected to because of the following informalities:

Claim 4 recites a limitation "said other station". There is insufficient antecedent basis for this limitation in the claim.

Claim 91 recites a limitation "the second communication scheme". There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 2, 7, 14, 32, 64, 67, 68, 70, 71, 73, 85, 87, 88 and 90 are rejected under 35 U.S.C. 102(b) as being anticipated by Proctor et al. (US Pat. 5,519,779, hereinafter referred to as Proctor).

Regarding claims 14, 32 and 85 Proctor discloses a method and device comprising:

receiving signal-coding parameters representative of a sound signal encoded in accordance with a first communication mode of a first communication scheme (**col. 3, lines 40-45, CDMA** (first communication scheme), **col. 5, Table 1, full rate** (first communication mode), **also fig. 1**);

receiving a request to transmit the signal-coding parameters using a second communication mode of the first communication scheme to reduce bit rate during transmission of said signal-coding parameters (**col. 3, lines 35-45, requesting insert signaling in a dim-and-burst format, also fig. 1 and 2, col. 5, lines 45-67, reducing speech coding to half rate** (second communication mode)); and

in response to the request, dropping a portion of the signal-coding parameters to enable transmission of the signal-coding parameters using the second communication mode of the first communication scheme (**col. 6, lines 1-67, reducing a full rate coding to a half rate coding by reducing coding parameters to enable signaling using dim-and-burst, also fig. 2**).

Regarding claims 2 and 88, Proctor further discloses the first communication mode of the first communication scheme is a full-rate communication mode and the second communication mode of the first communication scheme is a half-rate communication mode (**col. 5, line 45 – col. 6, line 15, reducing full rate coding to half rate coding**).

Regarding claims 7, 73 and 90, Proctor further discloses inserting an identification of a communication mode to be transmitted along with the remaining signal-coding parameters (**fig. 2, insert signaling**).

Regarding claims 64, 70 and 87, Proctor further discloses the dropped portion of the signal-coding parameters comprises fixed codebook indices (**col. 6, lines 30-50, drop half codebook indices**).

Regarding claim 67, Proctor further discloses an initial step of encoding the sound signal in accordance with the first communication mode of the first communication scheme (**col. 5, lines 9-67, full rate (first communication mode), CDMA (first communication scheme)**).

Regarding claim 68, Proctor further transmitting the remaining signal-coding parameters using the second communication mode of the first communication scheme (**col. 5, line 9 – col. 6 line 60, reducing full rate to half rate, CDMA**).

Regarding claim 71, Proctor further discloses transmitting the means for receiving a request is arranged to receive a request to transmit the signal-coding parameters using a half-rate communication mode (**col. 5, line 45 - col. 6, line 60, reducing full rate to half rate**).

Claim Rejections - 35 USC § 103

8. Claims 6 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Proctor in view of Jacobs et al. (US Pat. 5,414,796, hereinafter referred to as Jacobs).

Regarding claim 66, Proctor discloses reducing speech coding from full rate to half rate and transmitting coded speech to receiver. Proctor fails to but Jacobs discloses generating replacement signal-coding parameters to replace the dropped portion of the signal-coding parameters (**Jacobs, col. 36, lines 55-60, dropped codebook index is replaced by the random number**).

Jacobs discloses a variable bit rate vocoder. In response to a request, adjusting bit rate (**Jacobs, col. 15, lines 55-60, rate control; also fig. 4, #84**). Jacobs further discloses dropping codebook index at 1/8 rate (**Jacobs, col. 36, lines 55-60**).

Proctor and Jacobs are analogous art and from a similar field of applicant's endeavor in speech coding. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Proctor's teaching with Jacobs's teaching to adjust bit rate based on the decided rate and rate control commands (a request) and drop codebook index to reduce bit rate. The claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of

ordinary skill in the art would have recognized that the results of the combination were predictable.

Regarding claim 6, Proctor and Jacobs further discloses the dropped portion of the signal-coding parameters comprises fixed codebook indices and wherein generating replacement signal-coding parameters comprises randomly generating replacement fixed codebook indices (**Jacobs, col. 12, lines 44-60, generates random code vectors**).

9. Claims 63, 69, 74, 86 and 91 are rejected under 35 U.S.C. 103(a) as being unpatentable over Proctor in view of El-Maleh (US PG Pub. 2002/0101844, hereinafter referred to as El-Maleh).

Regarding claims 63, 69, 74 and 86, Proctor discloses communicate at full-rate or half-rate. Proctor does not explicitly disclose but El-Maleh discloses the first communication mode of the first communication scheme is interoperable with a first communication mode of a second communication scheme and the second communication mode of the first communication scheme is not interoperable with the first communication mode of the second communication scheme (**El-Maleh, [0008-0010], CTX (CDMA system) and DTX (GSM system) is interoperable for speech**

segments (first mode) but inoperable for non-speech segments (1/8 rate, second mode)).

Proctor and El-Maleh are analogous art and from a similar field of applicant's endeavor in speech coding. It would have been obvious to one of ordinary skill in the art at the time of the invention to include compatible operation for speech segments and incompatible for non-speech segments as taught by El-Maleh in Proctor's teaching since all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods, and in the combination each element merely would have performed the same function as it did separately. "A combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." KSR, 550 U.S. ___, 82 USPQ2d at 1395 (2007). One of ordinary skill in the art would have recognized that the results of the combination were predictable.

10. Claims 3, 73 and 89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Proctor in view of El-Maleh and further in view of Garg ("IS-95 CDMA and cdma 2000", Prentice Hall, 2000).

Regarding claims 3, 72 and 89, Proctor discloses inserting signaling using dim-and-burst and reducing speech from full-rate to half rate in a CDMA system. Proctor does not disclose interoperation between two communication systems using two

communication schemes. El-Maleh discloses interoperation between CDMA and GSM systems (El-Maleh, Abstract).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to include interoperation between CDMA and GSM (AMR-WB coding) systems as taught by El-Maleh in Proctor's system, since all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods, and in the combination each element merely would have performed the same function as it did separately. "A combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." KSR, 550 U.S. ___, 82 USPQ2d at 1395 (2007). One of ordinary skill in the art would have recognized that the results of the combination were predictable.

Proctor in view of El-Maleh discloses interoperation between CDMA and GSM (AMR-WB) systems but fails to disclose interoperation between CDMA2000 and GSM. Garg discloses CDMA and CDMA2000 system (**Garg, page 1**).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to substitute CDMA with CDMA2000, since each individual element and its function are shown in the prior art and one of ordinary skill in the art could have substituted one known element for another by known methods. "Simple substitution of one known element for another or the mere application of a known technique to a piece

of prior art ready for the improvement." KSR, 550 U.S. ___, 82 USPQ2d at 1395 (2007).

One of ordinary skill in the art would have recognized that the results of the simple substitution were predictable.

11. Claims 4, 19, 65, 75-81, 83-84 and 92-97 are rejected under 35 U.S.C. 103(a) as being unpatentable over Proctor in view of El-Maleh and further in view of Jacobs.

Regarding claim 65, Proctor discloses further discloses transmitting the remaining signal-coding parameters using the second communication mode of the first communication scheme (**Proctor, col. 6, lines 1-65, reducing full rate to half rate and transmitting speech coded in half rate**);

Proctor and El-Maleh fail to but Jacobs discloses generating replacement signal-coding parameters to replace the dropped portion of the signal-coding parameters; and decoding the signal-coding parameters including the replaced portion of the signal-coding parameters according to the first communication mode of the second communication scheme (**Jacobs, col. 36, lines 55-60, dropped codebook index is replaced by the random number; col. 15, lines 55-60, rate control; also fig. 4, #84; col. 36, lines 55-60**).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to include using randomly generated code vectors in decoder as

taught by Jacobs in Proctor speech coding and decoding system, since all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods, and in the combination each element merely would have performed the same function as it did separately. "A combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." KSR, 550 U.S. ___, 82 USPQ2d at 1395 (2007). One of ordinary skill in the art would have recognized that the results of the combination were predictable.

Regarding claim 4, Proctor, El-Maleh and Jacobs further discloses wherein decoding the signal-coding parameters comprises: operating the decoder of said other station in a full-rate mode (**Proctor, Table 1, El-Maleh, [0024]**).

Regarding claim 19, Proctor discloses device, system and method comprising:

a first station using a first communication scheme (**col. 3, lines 35-45, CDMA**);
said first station comprising:

means for encoding a sound signal to generate signal-coding parameters according to a first communication mode of the first communication scheme (**col. 5, line 10 – col. 6, line 60, speech coded in full rate** (first communication mode), **reducing to half rate to transmit signals using dim-and-burst method, also fig. 1**),

means for receiving a request to transmit the signal-coding parameters using a second communication mode of the first communication scheme (**col. 5, line 10 – col. 6, line 60, speech coded in full rate, reducing to half rate (second communication scheme) to transmit signals using dim-and-burst method**),

means for dropping, in response to said request, a portion of the signal-coding parameters encoded according to the first communication mode of the first communication scheme (**col. 5, line 10 – col. 6, line 60, reducing (dropping) some coding parameters such as codebook indices**), and

means for transmitting the remaining signal-coding parameters using the second communication mode of the first communication scheme (**col. 5, line 10 – col. 6, line 60, also fig. 1**);

a second station comprising:

means for receiving the remaining signal-coding parameters (**fig. 1, #20, receiving phone with decoder #46**),

means for decoding the signal-coding parameters using the remaining signal-coding parameters (**fig. 1, #46**).

Proctor discloses communication using CDMA communication scheme. Proctor fails to but El-Maleh discloses interoperation between two communication schemes (**El-Maleh, Abstract, also fig. 2, CTX and DTX, one is CDMA (first communication scheme) and the other uses GSM (second communication scheme)**).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to include interoperation between CDMA and GSM communication systems as taught by El-Maleh in Proctor's system, since all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods, and in the combination each element merely would have performed the same function as it did separately. "A combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." KSR, 550 U.S. ___, 82 USPQ2d at 1395 (2007). One of ordinary skill in the art would have recognized that the results of the combination were predictable.

Proctor and El-Maleh fails to generating replacement signal-coding parameters to replace said dropped portion of the signal-coding parameters.

Jacobs discloses replacing dropped signal parameters by randomly generating code vectors for synthesizing speech signal (**Jacobs, col. 36, lines 55-60, dropped codebook index is replaced by the random number; col. 15, lines 55-60, rate control; also fig. 4, #84; col. 36, lines 55-60**).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to include using randomly generated code vectors in decoder as

taught by Jacobs in Proctor speech coding and decoding system, since all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods, and in the combination each element merely would have performed the same function as it did separately. "A combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." KSR, 550 U.S. ___, 82 USPQ2d at 1395 (2007). One of ordinary skill in the art would have recognized that the results of the combination were predictable.

Regarding claim 75, 81 and 92, Proctor discloses a device comprising:
means for receiving an indication that signal-coding parameters have been transmitted using a second communication mode of a first communication scheme instead of a first communication mode of the first communication scheme to reduce bit rate during transmission of said signal-coding parameters, wherein the signal-coding parameters are representative of a sound signal (**fig. 1, #20, receiver and decoder, col. 5, line 45 – col. 6 line 15, receiving reduced bit rate**).

Proctor discloses communication using CDMA communication scheme. Proctor fails to but El-Maleh discloses a first communication mode of a second communication scheme (**El-Maleh, Abstract, also fig. 2, CTX and DTX, one is CDMA** (first communication scheme) **and the other uses GSM** (second communication scheme)).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to include interoperation between CDMA and GSM communication systems as taught by El-Maleh in Proctor's system, since all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods, and in the combination each element merely would have performed the same function as it did separately. "A combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." KSR, 550 U.S. ___, 82 USPQ2d at 1395 (2007). One of ordinary skill in the art would have recognized that the results of the combination were predictable.

Proctor does not disclose means for generating, in response to said indication, replacement signal-coding parameters to replace a portion of the signal-coding parameters dropped to reduce the bit rate during transmission in order to produce second signal-coding parameters.

Jacobs discloses generating replacement signal-coding parameters to replace the dropped portion of the signal-coding parameters (**Jacobs, col. 36, lines 55-60, dropped codebook index is replaced by the random number**).

Proctor and Jacobs are analogous art and from a similar field of applicant's endeavor in speech coding. Therefore, it would have been obvious to a person having

ordinary skill in the art at the time the invention was made to modify Proctor's teaching with Jacobs's teaching to generate random code indices to replace dropped signal-coding parameters. The claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Regarding claims 76 and 93, Jacobs further discloses the means for generating replacement signal-coding parameters is arranged to randomly generate replacement signal-coding parameters (**Jacobs, col. 36, lines 55-60, dropped codebook index is replaced by the random number**).

Regarding claims 77 and 94, Jacobs further discloses the randomly generated replacement signal-coding parameters comprise randomly generated replacement fixed codebook indices (**Jacobs, col. 36, lines 55-60, dropped codebook index is replaced by the random number**).

Regarding claims 78 and 95, the combined teaching of Proctor, El-Maleh and Jacobs further disclose means for transmitting the signal coding parameters including the replaced portion of the signal-coding parameters according to the first communication mode of the second communication scheme (**Jacobs, col. 36, lines 55-60, dropped codebook index is replaced by the random number; El-Maleh,**

Abstract, also fig. 2, CTX and DTX, one is CDMA (first communication scheme) and the other uses GSM (second communication scheme)).

Regarding claims 79 and 96, the combined teaching of Proctor, El-Maleh and Jacobs further disclose means for operating a decoder in a full-rate mode (**Proctor, table 1, full-rate**).

Regarding claims 80 and 97, Proctor further discloses means for receiving the signal-coding parameters and means for decoding the sound signal using the second signal-coding parameters (**Proctor, fig. 1, #46**).

Regarding claim 82, the combined teaching of Proctor, El-Maleh and Jacobs further disclose the first communication mode of the first communication scheme is interoperable with the first communication mode of the second communication scheme and the second communication mode of the first communication scheme is not interoperable with the first communication mode of the second communication scheme (**El-Maleh, [0008-0010], CTX (CDMA system) and DTX (GSM system) is interoperable for speech segments (first mode) but inoperable for non-speech segments (1/8 rate, second mode)**).

Regarding claim 83, the combined teaching of Proctor, El-Maleh and Jacobs further disclose transmitting the second signal coding parameters according to the first

communication mode of the second communication scheme (**EI-Maleh, [0008-0010], CTX (CDMA system) and DTX (second communication scheme) is interoperable for speech segments (first mode).**

Regarding claim 84, the combined teaching of Proctor, El-Maleh and Jacobs further disclose receiving the signal-coding parameters and decoding the sound signal using the second signal-coding parameters (**fig. 1, #46**)

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Krueger et al. (US Pat. 6,308,222) discloses proxy server transcodes audio signal from high bit rate to low so that client with slow network connection is able to download and listen the audio.

- Dejaco (US PG Pub. 2001/0018650) discloses decoder randomly generating code vectors to synthesize a speech signal.

- Yasunaga (US PG Pub. 2001/0027391) discloses randomly generating code vectors for decoding a speech signal.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JIALONG HE whose telephone number is (571) 270-

5359. The examiner can normally be reached on Monday-Thursday, 7:00AM-4:30PM, ALT. Fridays, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571)272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JH/

/James S. Wozniak/
Primary Examiner, Art Unit 2626